

Application No. 10/511,505  
 Amendment dated July 23, 2008  
 Reply to Office Action of April 23, 2008

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Docket No.: 62302(70403)

### AMENDMENTS TO THE SPECIFICATION

On the first page of the specification, please replace the title "SAMPLE COLLECTING DEVICE AND MASS SPECTROMETRY OF DEVICE" to:

■ MULTI-ELEMENT SCREENING OF TRACE ELEMENTS –

On page 15, lines 11-18, please replace the paragraph with the following:

[0109] The core components of the Sample Analysis System of this embodiment comprise a laser for producing an aerosol of the sample (Laser Ablation), an argon plasma, or 'electrical flame', operating at temperatures in excess of 7,000° C. (Inductively Coupled Plasma) in which the aerosol is ionized, a mass filter (Mass Spectrometer) for separating the ions into 'packets' according to their mass to charge ratio, and an ion detector (Multi-channel Analyzer or Ion Multiplier) for detecting the ions in each 'packet'. The system operates with a routine sensitivity capable of achieving parts per billion detection limits. All data can be electronically stored for future reference.

On page 35, lines 8-12, please replace the paragraph with the following:

[0216] Micro-litre samples of blood were delivered to, and contained within, the surface depressions on the surfaces of ten matrix pellets; five of these pellets were air dried at ambient temperature and the remaining five oven dried at 60° C. A further two blood drops were applied to the Perspex PERSPEX® (poly(methyl methacrylate) (PMMA)) mounting disc and dried. Here, the surface of the dried blood drops was not flat, but rather, strongly undulating

On page 35, lines 19-22, please replace the paragraph with the following:

[0218] For the matrix free blood drops, dried onto the Perspex PERSPEX® (poly(methyl methacrylate) (PMMA)) support, the ablated blood was far more coherent, with nice ablation. However, as noted above, the surface was strongly undulating leading to changed laser focal conditions and, hence, non-optimal results.

On page 35, lines 23-32, please replace the paragraph with the following:

[0219] Given that the aluminium hydroxide:cellulose matrix was not impervious, the matrix free approach described above can be adopted, ie. use impervious substrate, such as Perspex PERSPEX® (poly(methyl methacrylate) (PMMA)), into which 3 mm diameter by 125 micron deep circular impressions have been pressed, moulded or machined. Each sample collection device can contain two such depressions, one for a matrix-matched, trace metal-doped standard reference blood, and the second to contain and confine the unknown blood sample. Alternatively, a matrix-matched, trace metal-doped reference blood could be inserted into the analytical run such that each unknown had a standard immediately adjacent

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to it. This would lead to 33% reference samples in the analytical run as opposed to 50% if standard and unknown were applied to the same collection device.

On page 35, lines 33-36, please replace the paragraph with the following:

[0220] The results from this Experiment are presented in Appendix Experiment 18. This experiment examined heat and air-dried blood partially absorbed into an aluminium hydroxide:cellulose powder matrix, and matrix-free blood dried onto an impervious PerspexPERSPEX® (poly(methyl methacrylate) (PMMA)) substrate.